

**SECTION 15130****MISCELLANEOUS VALVES****PART 1 - GENERAL****1.01 SCOPE**

The Contractor shall furnish and install miscellaneous valves as required, complete and operable, including all appurtenances and accessories.

**1.02 RELATED WORK SPECIFIED ELSEWHERE**

Section 15100 - Valves, General

**PART 2 - PRODUCTS****2.01 AIR RELEASE VALVES (MANUAL) AND FLUSHING VALVE OUTLETS**

- A. The air release valve and flushing valve assemblies shall be installed in accordance with the details shown in the Standard Details. The following products shall be used to construct the assemblies:

Angle Valves (for air release valve  
and flushing valve outlet)

2-inch screwed valves with handwheel, bronze  
body and composition disc, Nibco T311 or ITT  
Grinnell Fig. No. 3220

Corporation Stops  
release)

1-1/2 inch, Mueller No. H-10003(for air

- B. Taps into ductile iron pipe for air release and flushing valve assemblies shall be AWWA Tapered thread only, and the Contractor shall provide suitable equipment for this purpose as approved by the Engineer. After the tap has been made, and the corporation stop installed a pipe conveying potable water, the inside of the pipe around the stop and the exposed exterior surfaces of the stop shall be heavily coated with Kop-Coat Super Hi-Gard 891 White 1898, or approved equal. Where taps are made in a pipe conveying sewerage, the Contractor shall heavily coat the inside of the pipe around the stop and the exposed exterior surfaces of the stop with Bitumastic 300M, by Kop-Coat Co., or approved equal
- C. The installation of the flushing valve outlet shall include excavation; cutting, threading and installing PVC and galvanized pipe and fittings; tapping the ductile iron plug; concrete thrust block; furnishing and installing angle valve; cutting and placing cast iron riser pipe complete with valve boxes and cover, set in concrete; backfilling and compaction; and all other appurtenant items and work
- D. The installation of air release valves shall include PVC pipe, angle valves, corporation stop, and placing ductile iron riser pipes complete with valve boxes and covers, set in concrete in accordance with the Standard Details.

## 2.02 SEWAGE AUTOMATIC AIR RELEASE VALVE

- A. Sewage automatic air-release valves shall be of the type that automatically releases accumulated air, gas or vapor under pressure during system operation and shall be of the size shown on the approved Plans or Standard Details. The internal mechanism shall be the compound lever type to permit the valve to open under pressure to vent pockets of entrapped air, gas or vapor as they accumulate. The compound mechanism shall be activated by a stainless steel concave float to lift the Buna-N needle or orifice button to control the air release orifice. Linkage shall be stainless steel. The air release valves shall be designed for a maximum working pressure of 150 psi. The valves shall be supplied with a 2-inch bronze isolation shut-off ball valve, 1-inch blow-off valve and a ½-inch quick-disconnect backflushing connection with shut off valve. The valve shall have a cast iron body and cover, stainless steel internal mechanisms and teflon coated inner lining.
- B. Automatic air release valves (for sewage) shall be Model 400 SARV, by APCO Valve and Primer Corp., Schaumburg, IL, Model 48S, by Val-Matic Valve and Manufacturing Corp., Elmhurst, IL, or approved equal.

## 2.03 PRESSURE AUTOMATIC AIR RELEASE VALVE

- A. The pressure automatic air-release valves shall be installed at locations selected by the Engineer of Record to automatically release accumulated air and other gases with the line under pressure. The internal mechanism shall be the compound lever type to permit the valve to open under pressure to vent pockets of entrapped air or gas as they accumulate. Valve shall be selected with orifice sized for venting at an acceptable discharge rate over the entire pressure range the main will be operated. It shall have sealing faces of an adjustable BUNA-N rubber valve and stainless steel. Valves which use a needle valve to seal the orifice shall not be acceptable. Valve shall have a 2-inch NPT screwed inlet connection and shall have cast iron body with stainless steel float and inner mechanisms. For valves where bolts thread into the housing (i.e. bonnet-to-body bolts), bolts shall be stainless steel. Valves shall be supplied with a 1-inch vacuum check valve on the outlet to eliminate the possibility of air entering the system when the pressure decreases or if a vacuum is drawn. The valves shall also be supplied with a 2-inch bronze isolation shut-off ball valve
- B. The pressure automatic air release valves (for water) shall be Model 45VC, by Val-Matic Valve and Manufacturing Corp., Elmhurst, IL, Model PL20/V5, by Crispin-Multiplex Manufacturing Co., Berwick, PA, or approved equal.

## 2.04 SERVICE SADDLES

Service pipe saddle shall fit to the maximum O.D. of the saddle's range, and extend a minimum of 160 degrees around the pipe. When the saddle is used on pipe to the minimum pipe size of the range, the saddle shall extend 180 degrees around the pipe. Straps shall have ends chamfered and be provided with Class 2 fit, National Coarse Threads. Saddle casting shall be ductile iron, double strap and shall have asphaltic coating. Straps shall be stainless steel. Valve gaskets shall be self sealing neoprene.

## 2.05 SMALL PRESSURE REDUCING VALVES (AIR AND WATER)

- A. General: Small air and water pressure reducing valves shall be of the spring-loaded diaphragm type with a minimum pressure rating of 250 psi, with bronze body, nickel alloy or stainless steel seat, and threaded ends. Each valve shall be furnished with built-in or separate strainer and union

ends.

B. Suppliers, or Equal:

Mueller Company

2.06 GLOBE VALVES

The globe valves for pipe 3 inches and smaller shall be handwheel operated, shall have ends threaded to American Tapered Pipe Thread (NPT) Standard, shall be designed for 150-pound working pressure and shall be bronze body equal to Crane Company No. 1, Nibco Inc., or approved equal.

2.07 CHECK VALVES (SMALL)

- A. Check valves, smaller than 3-inches in size, unless otherwise noted on the approved Plans, shall be 125 lbs. bronze body, bronze swing disk and, Y pattern body design, Crane 37 or approved equal.
- B. See Section 15115, "Check Valves", for check valves not specified above.

2.08 GATE VALVES (SMALL)

- A. Gate valves, smaller than 3-inches in size, unless otherwise noted on the approved Plans, shall be minimum 125 psi, bronze body, double disc, rising stems with heavy duty bronze handwheels. Valve shall have a full bore able to allow passage of a drill of the nominal valve size and be used in place of a corp. stop for tapping the main. James Jones Co. Model J-372, Stockham or approved equal. Ends should be as shown or indicated on the Plans. Each valve shall open by turning the handwheel counterclockwise. Valves shall be designed for at least 125 psi working pressure. Valves with reduced bores or appreciably lighter in weight than those specified will not be acceptable.
- B. See Section 15120, "Gate Valves", for gate valves not specified above.

2.09 PRESSURE RELIEF VALVE

The pressure relief valve shall maintain constant upstream pressure by by-passing or relieving excess pressure, and shall maintain close pressure limits without causing surges. It shall be adjustable with bronze body and stainless steel trim. Pressure relief valve shall be Cash-Acme type K-10, with a 5 to 75 psi adjustment range, Bell & Gossett, or approved equal.

2.10 BACKFLOW PREVENTER VALVES

- A. General: Backflow preventers shall work on the reduced pressure principle. The shall consist of two (2) spring-loaded check valves, automatic differential pressure relief valve, drain valves and shut-off valves. The body material shall be bronze or cast iron for a working pressure of not less than 150 psi, with bronze or stainless steel trim. Drain lines with air gaps shall be provided.
- B. Suppliers, or Equal

1. Febco, Fresno, CA
  2. Hersey, Cleveland, NC
  3. Ames, Woodland, CA
  4. Watts Regulator Co., N. Andover, MA
  5. Wilkins, Paso Robles, CA
  6. Conbraco, Matthews, NC
- C. The only backflow preventer assemblies authorized for use have been pre-tested by the Department. For the most recent listing of approved assemblies contact, Hugo Tandon, Chief, Meter Division at 547-3098. A table showing the list at time of writing is shown on the next page.

### **PART 3 - EXECUTION**

#### **3.01 GENERAL**

- A. All valves shall be installed in accordance with provisions of Section 15100, "Valves, General." Care shall be taken that all valves are well supported on each end of the valve.
- B. Installation of both manual and automatic air release valves shall be in accordance with subsection 2.01-B, above.
- C. All valves shall be installed in accordance with the supplier's printed recommendations.
- D. All air and vacuum release valves installed in pump stations shall have piped outlets to the nearest acceptable drain, firmly supported, and installed in such a way as to avoid splashing and wetting of floors.

**MIAMI-DADE WATER AND SEWER DEPARTMENT  
APPROVED BACKFLOW PREVENTION ASSEMBLIES**

DATE: FEBRUARY 4, 1996

MANUFACTURER	REDUCE PRESSURE ZONE (RPZA)		DOUBLE CHECK VALVE (DCVA)		DOUBLE CHECK DETECTOR (DCDA)		PRESSURE VACCUM BREAKER (PVBA)
	3/4"-2"	2 1/2"-10"	3/4"-2"	2 1/2"-10"	3/4"-2"	3"-10"	
WATTS REGULATOR CO. 815 CHESTNUT STREET N. ANDOVER, MA 01845 (508) 688-1811	009 QT OR 909 QT	909-OSYRW	007QT	709-OSYRW	N/A	709 DCDA-OSYRW C.F.M.	800 M3-QT-3/4 800 M2-QT - 1" - 2"
FEBCO 1550 NORTH PEACH FRESNO, CA 93727 (208) 252-0791	825-Y-B	825YD-OSYRW 860 880 880V	805Y-BV	805YD-OSYRW 850 870 870V	N/A	806YD-OSYRW C.F.M. 856 876 876V	765-BV-3/4" - 2"
HERSEY CLEVELAND, NC 27013 (404) 369-0215	FRP-11	6CM-OSYRW	HDC	#2-OSYRW	N/A	DDC-11-OSYRW C.F.M.	N/A
AMES 1485 TANFORAN AVENUE WOODLAND, CA 95776 (906) 666-2493	N/A	4000-OSYRW	N/A	2000-OSYRW	N/A	3000-OSYRW C.F.M.	N/A
WILKINS 1747 CP,,ERCE WAU PASO ROBLES, CA 93446 (805) 238-7100	975-XL	975-OSYRW	950 XL	950-OSYRW	N/A	950 DA-OSYRW C.F.M.	720A-3/4" -2"
CONBRACO P.O. BOX 247 MATTHEWS, NC 28106 (704) 841-6000	40-20(X)-A2	40-20(X)-03-OSYRW	40-10(X)-A2	40-10(X)-03-OSYRW	N/A	40-60(X)-03-OSYRW C.F.M.	40-50(X)-02-3/4"-2"

MDWASD

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END OF SECTION